

Sonos, Inc.’s Motion *In Limine* No. 2

EXHIBIT B

(Filed Under Seal)

Contains Highly Confidential AEO and Source Code Materials

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

GOOGLE LLC,

Plaintiff

v.

SONOS, INC.,

Defendant.

CASE NO. 3:20-cv-06754-WHA
Related to CASE NO. 3:21-cv-07559-WHA

**REPLY EXPERT REPORT OF DR. DAN SCHONFELD REGARDING U.S. PATENT
NO. 10,848,885 AND U.S. PATENT NO. 10,469,966**

Contains Highly Confidential AEO and Source Code Materials

TABLE OF CONTENTS

	<u>Page</u>
I. QUALIFICATIONS.....	2
II. MATERIALS CONSIDERED.....	2
III. LEVEL OF ORDINARY SKILL IN THE ART	2
IV. LEGAL STANDARDS	2
V. SUMMARY OF OPINIONS	2
VI. THE ASSERTED PATENTS	3
A. Claim Construction.....	3
B. Overview of the Asserted Claims.....	3
VII. STATE OF THE ART AND OVERVIEW OF THE PRIOR ART	4
VIII. SONOS’S “CONCEPTION” STORY	4
IX. INVALIDITY BASED ON ANTICIPATION AND OBVIOUSNESS	8
A. Claims of the ’966 Patent Are Obvious Based On Prior Art Sonos Products (“Sonos System”).....	8
1. Zone Scene.....	9
2. Obviousness In View Of Knowledge Of POSITA	15
3. Obviousness In View of Sonos Forums.....	17
4. Obviousness In View of Yamaha DME	21
B. Claims of the ’966 Patent Are Obvious Based On Squeezebox in view of General knowledge of a POSITA, the Sonos System, the Sonos Forums, the Bose system, Millington, Nourse, Rajapakse and Lindemann	23
1. Zone Scene (element 1.6).....	24
(a) Sync Groups Are Persistently Stored.....	24
(b) Sync Groups Can Overlap.....	26
(c) Sync Groups are “configured for synchronous playback”	28
(d) Squeezebox Discloses Standalone Mode	29
(e) Element 1.10 of the ’966 Patent (selected for invocation).....	30
2. Element 1.11 of the ’966 Patent (configured to coordinate)	31
3. Obviousness in view of general level of POSITA.....	32
4. Obviousness in view of Sonos Forums.....	32
C. Claims of the ’966 Patent Are Obvious Based On Bose Lifestyle in view of General knowledge of a POSITA, the Sonos Forums, Nourse, Rajapakse or Millington.....	33

Contains Highly Confidential AEO and Source Code Materials

1.	Bose Lifestyle 50 System does have “Zone Players”	33
2.	Bose Lifestyle 50 System does have “Zone Scenes”	35
3.	Obviousness In View Of Knowledge Of POSITA	36
D.	Claims of the ’966 Patent Are Obvious Based on Obviousness Type Double Patenting Over The ‘645 patent.	37
X.	NON-INFRINGEMENTALTERNATIVES.....	40
A.	Non-Infringing Alternative – No Standalone Mode	40
1.	No Infringement	40
2.	Commercial Acceptability.....	58
B.	Non-Infringing Alternative #2 – No Overlapping Groups	63
XI.	SECONDARY CONSIDERATIONS OF NON-OBVIOUSNESS.....	65
XII.	DEMONSTRATIVES	67
XIII.	OTHER COMMENTS	67

Contains Highly Confidential AEO and Source Code Materials

VI. THE ASSERTED PATENTS

10. I understand that the patents asserted against Google are the '885 and '966 patents. The chart below lists the claim of the asserted patents that Dr. Almeroth discussed in his report (the “asserted claims”).

Patent No.	Claim Asserted Against Google
10,848,885	1
10,469,966	1, 2, 4, 6, 8, 9, 10, 12, 14, and 16

A. Claim Construction

11. I incorporate herein by reference my discussion of claim constructions from my Supplemental Report. *See* Schonfeld Suppl. Rep. §II.

12. In all cases, I applied the agreed claim constructions or the Court’s constructions in performing my analyses and rendering my opinions in this Report.

B. Overview of the Asserted Claims

13. I have provided an overview of the asserted claims in my Opening Report, which I incorporate herein by reference.

14. I understand that Dr. Almeroth claims throughout his rebuttal report that I “only provided an analysis of his cited references in the context of Asserted Claim 1 of the '885 Patent, and never provides any analysis of the Asserted Claims of the '966 Patent,” and that “with respect to [my] invalidity ‘analysis’ of the Asserted Claims of the '966 Patent, [I] more or less just cite[] to [my] invalidity analysis of Asserted Claim 1 of the '885 Patent.” Almeroth Rebuttal Rep. at ¶¶ 472, 477. While it is true that the asserted claims of the '966 patent are not identical to those of the '885 patent, the differences in claim language are minimal—both claims describe substantially the same process, one from the perspective of zone player (for the '885 patent) and one from the perspective of a control device (for the '966 patent). I disagree with Dr. Almeroth that “unlike

Contains Highly Confidential AEO and Source Code Materials

Asserted Claim 1 of the '885 patent, the asserted claims of the '966 patent do not require the first zone player 'continuing to operate in the standalone mode' 'after receiving the first and second indications' that the first zone player has been added to first and second zone scenes, respectively." Almeroth Opening Report at ¶ 743. Although claim 1 of the '966 patent does not use the specific words "continuing to operate," the claim language nonetheless requires that the "zone scene" creation and invocation steps take place in standalone mode, as required by claim 1 of the '885 Patent.

15. I also note that throughout his report Dr. Almeroth considers that many "flaws" in my analysis in the context of asserted claim 1 of the '885 Patent are "applicable" to asserted claim 1 of the '966 patent, and that Dr. Almeroth treated those claims as substantially identical for purposes of infringement as well. *See e.g.*, Almeroth Rebuttal Rep. at ¶ 569; ¶478 ("Given Dr. Schoenfeld's reliance on his prior discussion of the Sonos System in the context of Asserted Claim 1 of the '885 Patent, where appropriate, I have referred back my rebuttal analysis and opinions regarding Asserted Claim 1 of the '885 Patent from my '885 Rebuttal Report.).

VII. STATE OF THE ART AND OVERVIEW OF THE PRIOR ART

16. I incorporate herein by reference my discussion of the state of the art and the overview of the prior art from my Opening Report. *See* Schonfeld Op. Rep.

VIII. SONOS'S "CONCEPTION" STORY

17. Dr. Almeroth relies on a set of Sonos documents as allegedly confirming that "Sonos controllers in Sonos's 2005 system did not have any functional capability for creating or invoking a 'zone scene.'" Almeroth Rebuttal Report ¶ 521. Despite Dr. Almeroth's opinions that my analysis of the '966 patent (claiming a zone player) is deficient because I refer back to my analysis of the '885 Patent (claiming a controller), as evidence of "conception" of the '966 patent claimed invention Dr. Almeroth here relies on the same set of documents, and the same arguments,

Contains Highly Confidential AEO and Source Code Materials

IX. INVALIDITY BASED ON ANTICIPATION AND OBVIOUSNESS

21. It is my opinion that claim 1 of the '885 patent is anticipated and/or rendered obvious by the prior art identified in my Opening Report. Dr. Almeroth has chosen not to rebut my arguments with respect to the '885 patent. I reserve my right to offer opinions on invalidity of claims other than claim 1 in light of new information or changes in the posture of the litigation. To the extent Dr. Almeroth is permitted to provide analysis and/or new opinions regarding the asserted claims of the '885 patent, I reserve my right to address such analysis and/or opinions in a supplemental report and/or at trial.

A. Claims of the '966 Patent Are Obvious Based On Prior Art Sonos Products (“Sonos System”)

22. Dr. Almeroth fundamentally misunderstands or mischaracterizes my opinions with respect to invalidity of the '966 patent asserted claims based on the Sonos System, in combination with the level of skill of a POSITA, the Sonos Forums, Nourse, Millington, Squeezebox, Crestron, Yamaha DME, Rajapakse and/or Lindemann.

23. First, Dr. Almeroth incorrectly contends I have “not performed any analysis or offered any opinions as to whether Asserted Claim 1 of the '966 patent as a whole would have been obviousness (sic).” Almeroth Rebuttal Rep. ¶ 860. I understand that the question of obviousness must be resolved on the basis of relevant factual inquiries, including determining the scope and content of the prior art, ascertaining the differences between the claimed invention and the prior art, and resolving the level of ordinary skill in the pertinent art. I performed each of these analyses in my Opening Report.

24. Second, Dr. Almeroth throughout his rebuttal opinions regarding the Sonos System complains that I have not adequately addressed the claims of the '966 patent because in my Opening Report I relied in part on cross-references to my analysis of the claims of the '885 patent.

Contains Highly Confidential AEO and Source Code Materials

However, as I explained above in Section VI.C, the claims of the '885 patent and the '966 patent are directed to substantially the same subject matter, albeit claimed from two different perspectives—either from the perspective of the claimed “controller” or from the perspective of the claimed “zone player.” The change in perspective does not affect how the prior art discloses the claimed inventions for any of the references that I have discussed, as each disclose systems including the claimed “controller” interacting with the claimed “zone player.”

25. Third, for each limitation, Dr. Almeroth claims that it is not clear to him whether I assert anticipation or obviousness. This boilerplate opinion is confusing given that Dr. Almeroth also asserts that I “only opine[d] that Asserted Claim 1 of the '966 Patent is rendered obvious based on Sonos’s 2005 System.” Almeroth Rebuttal Report ¶¶645. My opinions regarding the obviousness of the asserted claims over the Sonos System are clear in my Opening Report.

1. Zone Scene

26. I understand Dr. Almeroth to set out four “key distinctions” between the claimed “zone scenes” and the alleged prior art “ad-hoc” groups. Dr. Almeroth opines that “zone scenes” must: (i) be a user-customized, pre-saved group of zone players that is able to exist in an inactive state while remaining available for selection by a user so that the group can be invoked later on demand for synchronous playback, (ii) must not automatically restrict the functionality of the zone players in the zone scene so each zone player can still be used for individual playback while remaining a part of the zone scene, (iii) must allow a zone player to simultaneously be a member of multiple zone scenes and to be available for selection by a user contemporaneously, and (iv) must allow zone scenes to be persistent, i.e., to exist prior to being activated and remain in existence after a user chooses to “uninvoke a previously-invoked ‘zone scene.’” Almeroth Rebuttal Report ¶¶490-496. Dr. Almeroth does not identify any claim construction order requiring this multi-part construction or intrinsic or extrinsic evidence supporting each of the additional

Contains Highly Confidential AEO and Source Code Materials

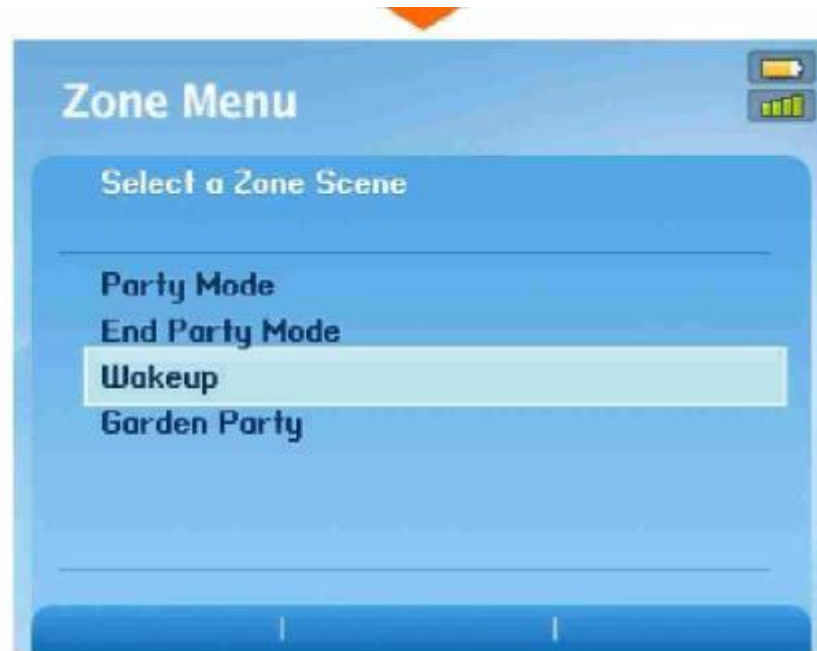
limitations that he has added to the term “zone scene.” Furthermore, he ignores that his “zone scenes” construction requirement (ii) contradicts his opinions regarding non-infringing alternative number 1 (no standalone mode) because the functionality of speakers added to a group is restricted and those speakers no longer play back music individually. Likewise, Dr. Almeroth’s “zone scenes” construction requirement (iii) contradicts any opinion that non-infringing alternative #2, which removes the ability for a speaker to exist in two speaker groups at the same time, could still infringe.

27. Dr. Almeroth’s “zone scene” construction also contradicts the documents that he uses to explain the meaning of “zone scene,” such as SONOS-SVG2-00026839. *See* Almeroth Reb. Rep. ¶¶498-502. Contrary to Dr. Almeroth’s assertion that a zone scene must be “user-customized,” this document shows that “party mode,” which was a pre-set group created by Sonos, was in fact a zone scene.

2.1.1 Method 1: Include Scenes in the Zone menu



Contains Highly Confidential AEO and Source Code Materials

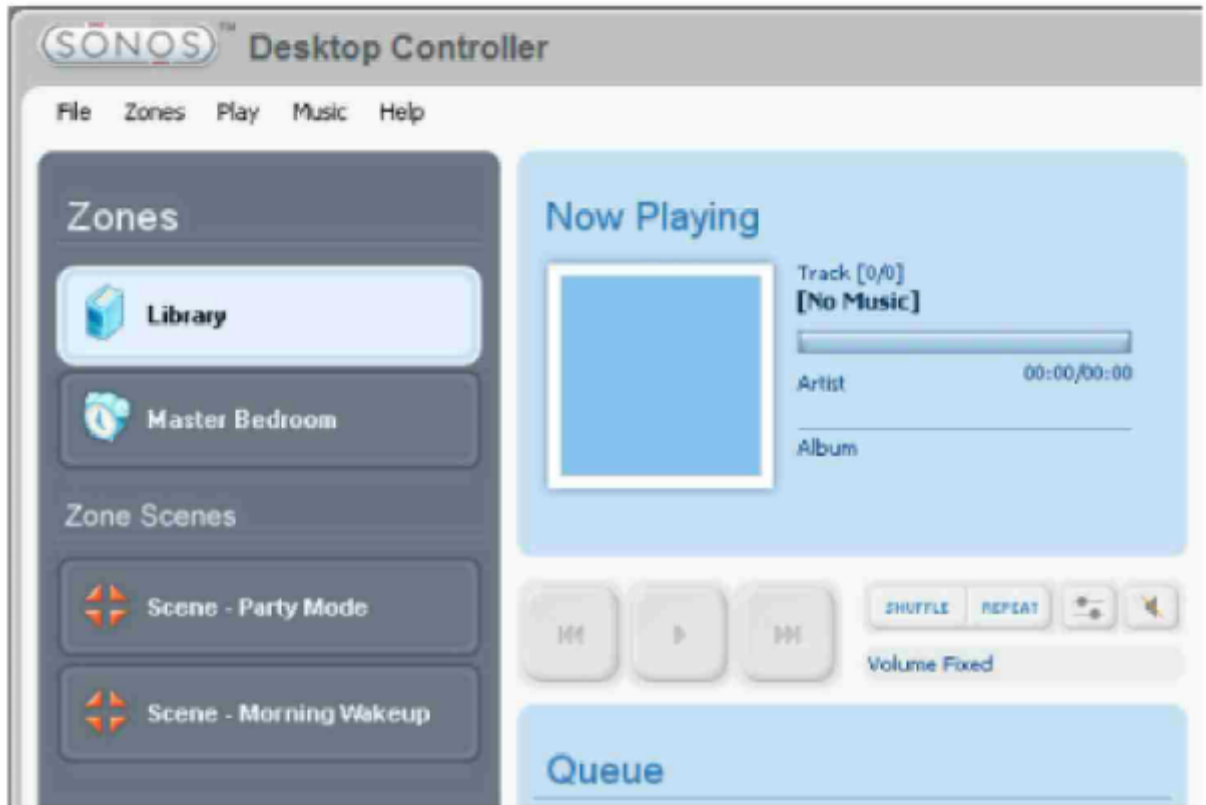


Contains Highly Confidential AEO and Source Code Materials

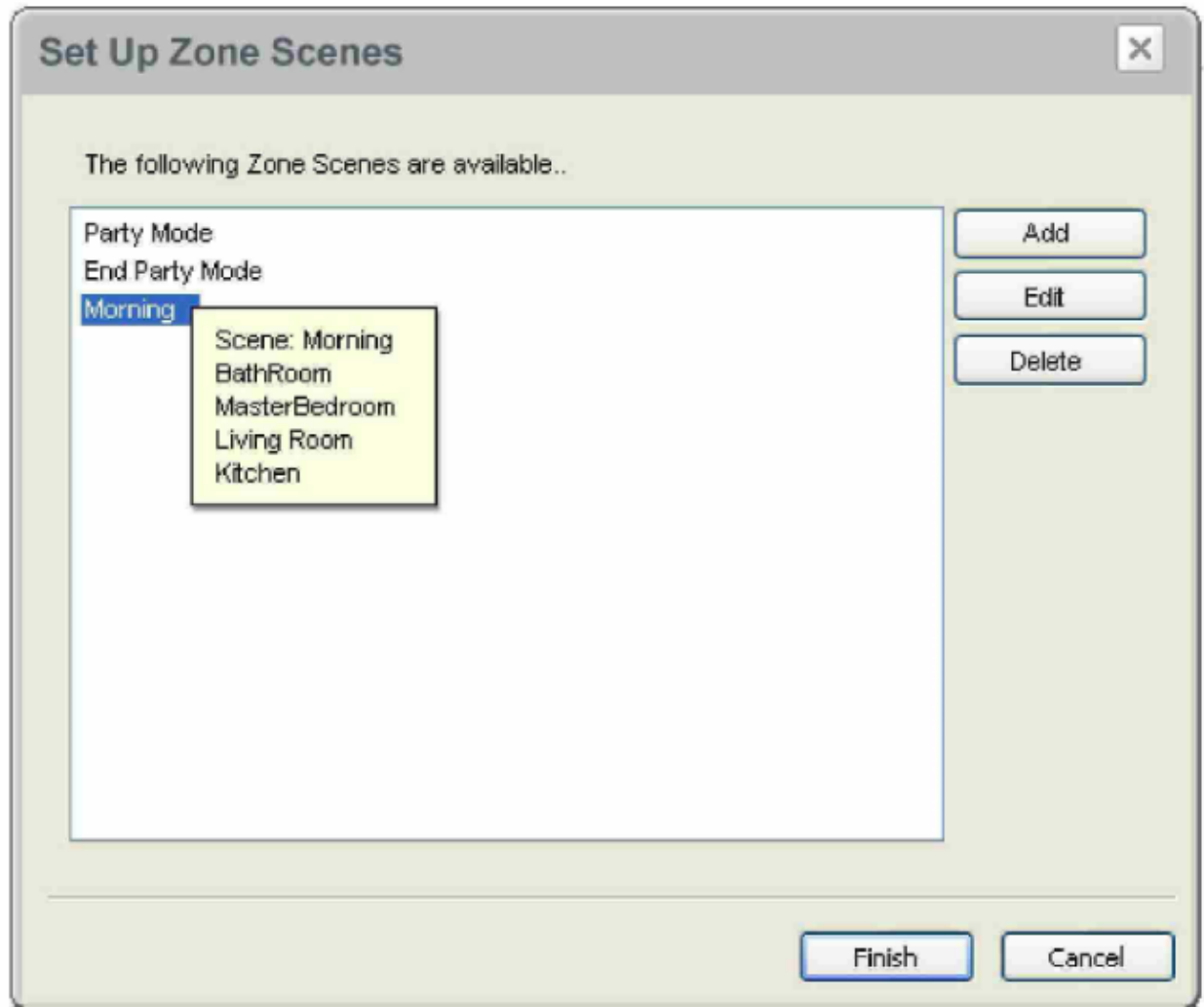
2.1.1 Method 1: As part of 'Zones' application menu



Contains Highly Confidential AEO and Source Code Materials



Contains Highly Confidential AEO and Source Code Materials



SONOS-SVG2-00026839.

28. With respect to claim 1 of the '966 patent, Dr. Almeroth repeatedly asserts that the Sonos 2005 System¹ does not disclose many of the claimed limitations because it does not disclose “zone scenes” and instead only discloses ad-hoc groups. Almeroth Rebuttal Report ¶¶ 551-642.

29. I note that throughout his report, in addressing the obviousness combinations I set forth in my Opening Report, Dr. Almeroth takes inconsistent positions with respect to the meaning

¹ Dr. Almeroth complains that “Dr. Schonfeld has not established that these physical Sonos products were loaded with prior art firmware,” but he overlooks my understanding that Google specifically requested that Sonos make its prior art products available, loaded with prior art firmware, for inspection and Sonos did not do so. Almeroth Reb. Rep. ¶262, *see also* Ex. 2 (email from C. Richter).

Contains Highly Confidential AEO and Source Code Materials

of “zone scene.” *E.g.*, Almeroth Rebuttal Rep. ¶¶ 518, 700, 757, 815, 842. Taking the Sonos System and Crestron combination as an example, Dr. Almeroth claims that “Crestron’s centralized AES speaker system did not have any capability for a user to assign a thematic name to a ‘Room Group,’ which fails to meet the additional ‘according to a common theme’ requirement of Google’s proposed construction of a ‘zone scene.’” Almeroth Rebuttal Rep. ¶ 757. Dr. Almeroth, however, did not include any requirement for “common theme” naming in his construction of “zone scenes,” as I set forth above. Accordingly, Dr. Almeroth appears to be taking inconsistent positions—requiring a far narrower construction for “zone scene” in some circumstances (*e.g.*, regarding the invalidity of the claims over the Crestron system), and a broader construction of “zone scene” for his infringement analysis.

2. Obviousness In View Of Knowledge Of POSITA

30. I disagree with Dr. Almeroth’s opinions on obviousness in view of the level of skill of a POSITA. First, Dr. Almeroth opines that “the fact that the inventor of the ’885 and ’966 patents considered the ad-hoc grouping mechanism of Sonos’s 2005 system to be ‘time consuming’ does not establish that a POSITA in 2005-06 would have recognized this as a problem with the ad-hoc ‘zone group’ functionality of Sonos’s 2005 system.” Almeroth Rebuttal ¶657. Dr. Almeroth’s opinions on this are unsound because engineers in this field generally attempt to optimize for time efficiency. Dr. Almeroth also states that “[t]he fact that a very small handful of Sonos users submitted comments about the existing ad-hoc ‘zone group’ functionality of Sonos’s 2005 system does not establish that a POSITA in 2005-06 would have found that ‘zone group’ functionality to be some [*sic*] ‘time consuming’ to the point that it needed to be replaced with a different grouping mechanism.” Almeroth Rebuttal Report at n. 26. The inventors of the ’885 and ’966 patents were POSITAs, and I am not aware of any requirement for a certain number of POSITAs needed in order for obviousness to apply. Further, this contemporaneous evidence does

Contains Highly Confidential AEO and Source Code Materials

tend to show that persons of skill in the art, generally, at the time considered the prior implementation to be problematic and were searching for (and had in fact found) a solution.

31. Further, Sonos employees and/or Sonos users did not simply “submit[] comments about the existing ad-hoc ‘zone group’ functionality,” they expressed interest in improving the existing functionality, and provided specific ways to do so, for example by allowing users to save groups persistently. Sonos users described these techniques in the Sonos Forums. These Sonos Forums are evidence of at least the level of skill of a POSITA, and evidence that a POSITA would have been motivated to improve upon the existing functionality, resulting in the claimed invention. The fact that Sonos’s own inventor shared these concerns and acknowledged that they were well understood only highlights the obviousness of the claimed concept.

32. Dr. Almeroth claims I “never articulate[] what [I] consider[] to be the claimed functions of ‘i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene’ in Sonos’s 2005 system.” Almeroth at ¶ 592. This is incorrect. As I explained in my Opening Report, Sonos Forums users discussed the ability to save and name “zone scenes,” indicating the abilities and understandings of persons of skill in the art. Opening Report ¶¶ 330, 336, 344, Section X.

33. Furthermore, I note that Sonos is accusing storage of group UUIDs as meeting the claimed zone scene storage. *E.g.*, Almeroth Op. Rep. ¶376. Under Dr. Almeroth’s interpretation of this requirement for infringement, the Sonos 2005 System discloses the same at least because it utilizes a SetAVTransportURI SOAP action with a Rincon group URI identifying the group to join (joinee group). *See* Schonfeld Opening Report at 354. Dr. Almeroth’s opinions that substantially the same functionality is sufficient for infringement of this element but does not disclose or suggest this element are inconsistent. Dr. Almeroth opines that the SetAVTransportURI would disclose

Contains Highly Confidential AEO and Source Code Materials

the claim elements where I have identified it, if not for Dr. Almeroth's opinions that the disclosed groups in the Sonos 2005 System and in the Sonos Forums do not meet the requirements of a "zone scene."

34. Additionally, Sonos Forum users understood that the Sonos 2005 System itself already provided the structure for creating groups (now zone scenes), providing an indication of those groups (now zone scenes) to the zone player, and storing those groups (now zone scenes) because this was all standard functionality of the existing Sonos 2005 System. In the Sonos 2005 System, this was implemented using for example a cramfs filesystem that is stored on flash (persistent) memory. *See* Opening Report ¶285. A POSITA would have found it straightforward to similarly use and store group information in the existing Sonos 2005 System but to store that information in these persistent structures, allowing for long-term storage of zone groups ("scenes"). This compares to Dr. Almeroth's allegations regarding the transient nature of the "ad hoc" zone groups in the Sonos 2005 System. The Sonos Forum users were merely suggesting slight modifications to the existing design to use "zone scenes" instead of the alleged "ad hoc" groups. Dr. Almeroth errs in reading the Sonos Forum posts in a vacuum rather than as suggested modifications to the Sonos 2005 System, as I described in my Opening Report. *See* Opening Report ¶ 285. A POSITA would have found it straightforward to use and store group information in the existing Sonos 2005 System, but to store that information for longer, such that the zone group remained available for selection for a longer period of time. The Sonos Forum users were merely suggesting slight modifications to the existing design to use "zone scenes" instead of the alleged "ad hoc" groups. Dr. Almeroth errs in reading the Sonos Forum posts in a vacuum rather than as suggested modifications to the Sonos 2005 System, as I described in my Opening Report.

3. Obviousness In View of Sonos Forums

Contains Highly Confidential AEO and Source Code Materials

35. Dr. Almeroth acknowledges Sonos Forum posts dated prior to the alleged December 21, 2005 conception date are prior art under 102(a).² Almeroth Rebuttal ¶ 274.

36. Nevertheless, Dr. Almeroth seems to suggest that my obviousness analysis is unfounded, however, because I refer to the obviousness analysis set forth in connection with claim 1 of the '885 patent. Almeroth Rebuttal at ¶ 671. As I explained in Section VI.C above, given the similarities between the claims of the '885 and '966 patents, a POSITA would have been equally motivated to combine the Sonos 2005 System with Sonos Forums to arrive at the claimed '885 and '966 inventions, which, again, describe substantially the same system from the perspective of the “zone player” and the “controller,” respectively.

37. First, a POSITA familiar with the Sonos 2005 “zone groups” would have been motivated based on the Sonos Forums to persistently save those zone groups, resulting in the claimed “zone scenes.” This is disclosed in the Sonos Forums for example by “theboyg” suggesting a way to be able to utilize zone “groups” without having to go through the linking or unlinking process associated with zone groups every time.

38. Additionally, or as an alternative, a POSITA familiar with the Sonos 2005 party mode feature would have been motivated based on the Sonos Forums to create multiple “party modes,” resulting in the claimed “zone scenes.” This is disclosed in the Sonos Forums for example by “JeffT” disclosing “2 party modes, Summer and Winter.”³ In order to have multiple “party

² Dr. Almeroth complains that certain posts in the Sonos Forums were “dated after the claimed conception date of December 21, 2005,” but many of these posts still predate the earliest claimed effective filing date of the asserted patents of September 12, 2006, and Sonos has not proven it is entitled to an earlier priority date. I also note that Dr. Almeroth repeatedly relies on posts in the Sonos Forums dated after December 21, 2005, and even after September 12, 2006. *E.g.*, Almeroth Reb. Rep. ¶ 285 (citing Forum posts dated in 2016).

³ Dr. Almeroth argues, in one sentence, that the Sonos Forum posts are not enabled. Almeroth Reb. Rep. ¶ 277 (“Indeed, these threads are nothing more than a wish list – they do not enable a POSITA as to how a ‘virtual zone’ or saved ‘Zone links as favorites’ could be implemented.”). Dr. Almeroth does not identify what “experimentation” a person of skill in the art would need to

Contains Highly Confidential AEO and Source Code Materials

modes” a user would have to manually select which speakers to associate with which party mode, such that these party modes would be user created/defined.

39. Dr. Almeroth claims I never explain how the JeffT September 22, 2005 post and February 27, 2005 post by theboyg “purportedly satisfy the specific player-side ‘zone scenes’ functionality . . . let alone the specific controller-side ‘zone scene’ functionality.” Almeroth ¶ 675. However, a zone scene is a zone scene, whether viewed from the player side or from the controller side. The Sonos Forum posts disclose persistent groups, which Dr. Almeroth has equated with zone scenes. For example, JeffT references “2 party modes, Summer and Winter.” As evidenced by the Sonos System, party modes are persistent. And in this case, to have “2 party modes, Summer and Winter” would require a user to select which speakers should be assigned to the Summer party mode, and which speakers would be assigned to the Winter party mode. Theboyg’s post notes that “[t]his ‘link/unlink’ business is really cumbersome” and explains that the ability to save a zone (*e.g.*, “Downstairs”) would mean he “do[esn’t] have to keep manually linking/unlinking multiple zones everytime.” Theboyg’s post is clearly referring to the ability to save zone scenes instead of the “ad hoc” groups Dr. Almeroth contends require manual linking/unlinking every time a user wanted to use a group. These Sonos Forum posts therefore disclose persistent storing of zone groups, such that a user could request creation of the claimed zone scene and based on this request cause creation of the zone scene, cause an indication of the first zone scene to be transmitted and cause storage of the first zone scene as required by the claim.

perform to combine the Sonos Forums with the Sonos System as discussed herein, nor does he make any argument that such experimentation would be “undue.” To the contrary, as I have explained, the changes to the Sonos System suggested by the users were straightforward and would have been straightforward to implement given the existing capabilities of the Sonos System. Sonos has not shown any evidence that once it decided to add the alleged “zone scenes” to its products in 2020 that there was any undue experimentation involved.

Contains Highly Confidential AEO and Source Code Materials

40. Dr. Almeroth claims that the Summer and Winter party modes are not overlapping.⁴ But the Sonos Forum post states the “Summer mode would **include** the deck speakers and the Winter mode would not.” GOOG-SONOS-WDTX-INV-00015877 at 877-78; Almeroth Reb. Rep. ¶ 273. It does not state that the Summer mode would consist of the deck speakers alone. If the Summer mode includes deck speakers, a POSITA would have understood that it would have included other speakers, such as the inside speakers, particularly given that the definition of “party mode” was already well understood to refer to all speakers in the system. Any functionality to present previously-created zone scenes to a user is the same functionality already provided by the Sonos System to present zone groups and/or party modes. The Sonos Forums disclose the ability to invoke one or more overlapping sets of speakers.

41. Dr. Almeroth opines that Mr. Lambourne conceived of “zone scenes” before any Sonos Forums posts. Almeroth Reb. Rep. ¶ 281. However, as I discussed during my deposition, for example in relation to SONOS-SVG2-00026888, Mr. Lambourne may have memorialized some thoughts about multiple zone profiles but it is not clear whether these zone profiles were meant to be simultaneous or sequential, and a number of the documents Dr. Almeroth relies upon actually post-date the relevant Sonos Forum posts. For example, Dr. Almeroth states “there could not have been prior conception from the foregoing posts because Mr. Lambourne already memorialized his thoughts on his “zone scene” concept at least 4 months prior to the earliest post from the ‘Macro / presets’ thread that was posted by user ‘JeffT’ on September 22, 2005.” Almeroth Rebuttal ¶¶ 281-282. But the document Sonos relies on as evidence of Mr. Lambourne’s

⁴ Dr. Almeroth cites to GOOG-SONOS-WDTX-INV-00015870 at 871, which is a forum post from April 2006, querying whether the prior suggestion of overlapping zone groups was the most desirable: “Now this brings an interesting question: should zones be allowed to be in more than one group?” Almeroth Reb. Rep. ¶ 284. Dr. Almeroth opines that this “suggests there were concerns” about overlapping groups, but that does not contradict and only reinforces the fact that overlapping groups were disclosed in the Sonos Forums. *See id.*

Contains Highly Confidential AEO and Source Code Materials

earlier “memorializ[ation]” (SONOS-SVG2-00026888) is an April 11, 2005 email which post-dated the post by “theboyg” in February 2005, as I explained in my deposition. *See* Schonfeld Dep. Tr. at 200:5-210:4. Furthermore, I understand that the earliest conception date that Sonos claims is December 2005, not April 2005. To the extent Sonos is permitted to change its contentions regarding conception, I will respond to any earlier claimed conception date in a supplemental report.

42. As I explained in my Opening Report, and addressed above with respect to the level of knowledge of a POSITA, the Sonos Forums discussed the ability to create, name, and save “zone scenes.” Opening Report at 330, 336, 344, Section X. The zone scenes could be transmitted, stored, and maintained just as the Sonos 2005 system handled the zone groups and party mode zone scenes in the Sonos 2005 system, as I described. As I opined, the difference in this combination would be that the zone scenes from the Sonos Forums could be combined with the Sonos 2005 system to allow the creation of the claimed zone scenes, like the creation of zone groups, the indication of zone scenes to be transmitted, like the indication of zone groups were transmitted, and the storage of the zone scene, which would be persistent as to a temporary storage of the zone groups, or similar to the persistent storage of the party mode zone scenes. Furthermore, it is clear that a POSITA would have understood that saving a zone scene requires some storage of the zone scene.

4. Obviousness In View of Yamaha DME

43. In an attempt to deflect from the Yamaha DME obviousness combinations identified in my Opening Report, Dr. Almeroth claims that “none of the three documents that Dr. Schonfeld cites to support this assertion even mention the Yamaha DME System.” Almeroth Rebuttal Rep. ¶ 796. However, all three documents show that Sonos was aware of Yamaha’s offerings and relevance, and support my opinion that a POSITA would have been motivated to

Contains Highly Confidential AEO and Source Code Materials

look to Yamaha, one of a limited number of companies providing sound systems at the time, and to Yamaha's products. SONOS-SVG2-00032289 makes clear that Sonos was aware of at least some Yamaha products as early as 2003, SONOS-SVG2-00033695 makes clear that Sonos considered Yamaha as a potential competitor in the audio space because it expected that some of its customers would have considered a Yamaha alternative, and similarly SONOS-SVG2-00053679 identifies Yamaha as a competitor, along with Google. These three documents confirm that Yamaha was recognized as an innovator in the same space as Sonos's products, a fact that a POSITA in 2005 would have been aware of.

Contains Highly Confidential AEO and Source Code Materials

B. Claims of the '966 Patent Are Obvious Based On Squeezebox in view of General knowledge of a POSITA, the Sonos System, the Sonos Forums, the Bose system, Millington, Nourse, Rajapakse and Lindemann

44. Dr. Almeroth fundamentally misunderstands or mischaracterizes my opinions with respect to invalidity of the '966 claims based on Squeezebox⁵ and the obviousness combinations with Squeezebox⁶ that I discussed in my Opening Report.⁷

45. As with my analysis of the Sonos System prior art and corresponding obviousness combinations, Dr. Almeroth again asserts that (i) I have not properly considered claim 1 of the '966 patent as a whole, and (ii) I have not adequately addressed the claims of the '966 patent because in my Opening Report I relied on cross-references to my analysis of the claims of the '885

⁵ In reference to the Squeezebox test setup that I used, Dr. Almeroth opines that “Google did not make Dr. Schonfeld’s same Linux-based system available for inspection.” Almeroth Reb. Rep. ¶ 329. Not so. The setup that Dr. Almeroth used, tested, and photographed in his report appears to be the same setup that I tested. Dr. Almeroth also appears to misunderstand how virtual machines work given his criticisms of the age of the test device. *E.g., id.* ¶ 331 (“As further shown in these images, during the inspection, the WiFi interface being utilized by the 2018 Mac mini had firmware dated July 12, 2021, which again is well after the September 12, 2005 critical date, the December 21, 2005 invention date, and the September 12, 2006 priority date of the '885 and '966 Patents.”). Dr. Almeroth apparently understood that the Mac Mini WiFi interface was being used to test, which is not the case.

⁶ Dr. Almeroth also appears to believe that the specific test setup must have been created before the priority date to constitute prior art—as compared to whether the prior art system disclosing the invention was “known or used by others” or “in public use or on sale.” Almeroth Reb. Rep. ¶ 333 (“Dr. Schonfeld failed to establish that a system having three instances of the same Softsqueeze software player was ever implemented on the same computer.”). I have instead applied the legal understandings set forth in my Opening Report.

⁷ Dr. Almeroth repeats many of the same arguments regarding the public availability of the Squeezebox players from his original validity report regarding the '885 patent. For example, Dr. Almeroth argues that certain of the firmware running on the prior art products may have been released after the conception or priority dates. Almeroth Reb. Rep. ¶¶ 295-304. There are no changes in the firmware notes, however, that indicate any change to the core invalidating functionality of each of these products, and Dr. Almeroth does not identify any. These devices confirm my understanding of the prior art disclosures.

Contains Highly Confidential AEO and Source Code Materials

patent. For the same reasons I explained above in Section IX.A with respect to the Sonos system, I disagree with Dr. Almeroth.

46. Dr. Almeroth claims I “fail[] to articulate what [I] consider to be the ‘computing device,’ the ‘zone players,’ and the ‘networked media playback system’ of Asserted Claim 1 of the ’966 Patent in my ‘Squeezebox’ reference.” Almeroth Rebuttal Rep. ¶ 926. But Dr. Almeroth correctly maps “(i) the ‘computing device’ of Asserted Claim 1 of the ’966 patent to a computer installed with SlimServer software, (ii) the ‘zone players’ of the ’966 patent to physical Squeezebox players and software-based SoftSqueeze players, which I will collectively refer to as ‘Squeezebox players’ for simplicity, and (iii) the ‘networked media playback system’ of Asserted Claim 1 of the ’966 patent to a system comprising a computer installed with the SlimServer software and Squeezebox players.” *Id.* ¶ 927.

47. To the extent it is not clear to Dr. Almeroth whether I assert anticipation or obviousness, I do opine that Asserted Claim 1 of the ’966 patent is anticipated and/or rendered obvious based on the Squeezebox System in view of the Squeezebox System itself, the level of skill of a POSITA, Sonos Forums, and additional secondary references.

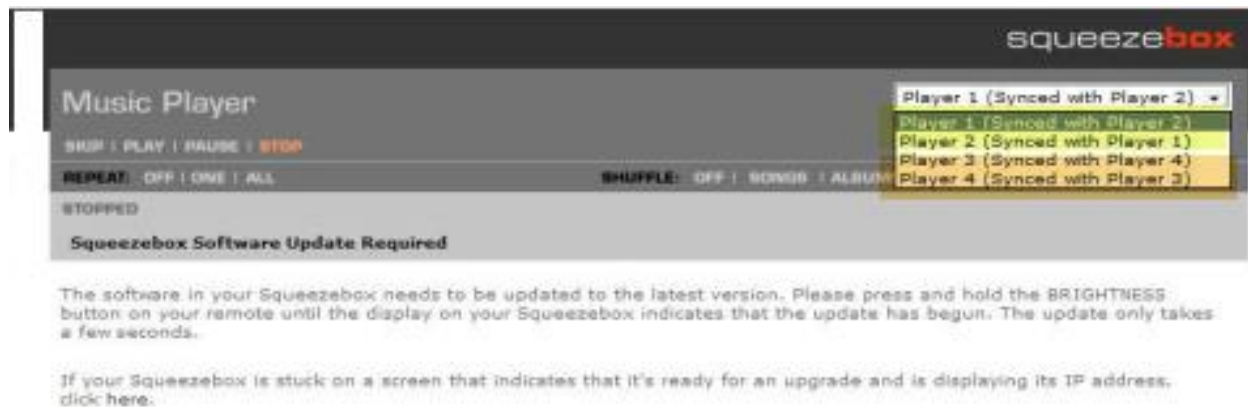
1. Zone Scene (element 1.6)

48. As I addressed above in Section XI with respect to the Sonos System, Dr. Almeroth set out four “key distinctions” between “zone scenes” and temporary ad-hoc groups; which I disagree are required by the claims. Throughout Section XV.B of his rebuttal report, Dr. Almeroth opines that the Squeezebox does not disclose zone scenes. I disagree, because even under Dr. Almeroth’s multi-part definition of “zone scene,” in my opinion the Squeezebox “sync groups” are “zone scenes.”

(a) Sync Groups Are Persistently Stored

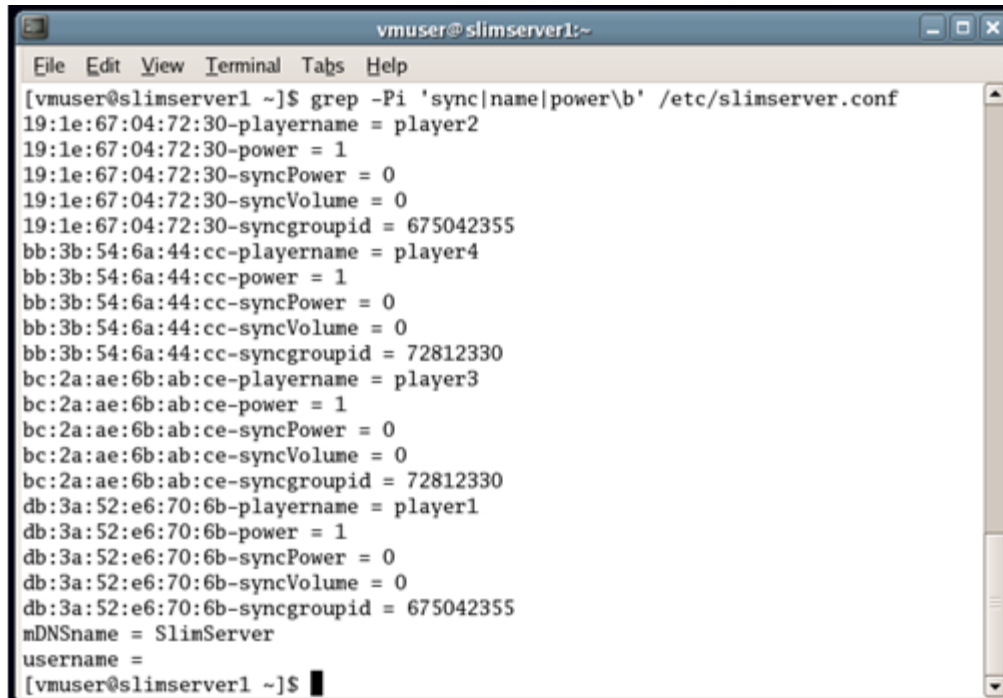
Contains Highly Confidential AEO and Source Code Materials

49. A sync group is persistently stored. Dr. Almeroth opines “that a ‘sync group’ of Squeezebox players was a temporary, ad-hoc group that was automatically activated at the time it was created and then only remained in existence until the time that the ‘sync group’ was deactivated, at which time the ‘sync group’ would be automatically destroyed such that the ‘sync group’ was not available to be later invoked on demand for synchronous playback.” Almeroth Rebuttal Rep. ¶ 937. But Dr. Almeroth ignores the evidence showing that multiple sync groups could be saved and coexist at the same time. For example, as I showed in my Opening Report, a group of Players 1 and 3 can exist at the same time as a group of Players 3 and 4. *See* Schonfeld Op. Report ¶ 525, reproduced in part and annotated below.



50. Similarly, Dr. Almeroth ignores that when adding a new Squeezebox player the user is presented with multiple saved sync groups, which are stored and available. *See* Schonfeld Op. Report ¶ 541. This is confirmed by the server preferences file, which indicates that Players 1 and 2 share a syncgroup ID (675042355) at the same time that Players 3 and 4 share a different syncgroup ID (72812330).

Contains Highly Confidential AEO and Source Code Materials



```

vmuser@slimserver1:~$ grep -Pi 'sync|name|power\b' /etc/slimserver.conf
19:1e:67:04:72:30-playername = player2
19:1e:67:04:72:30-power = 1
19:1e:67:04:72:30-syncPower = 0
19:1e:67:04:72:30-syncVolume = 0
19:1e:67:04:72:30-syncgroupid = 675042355
bb:3b:54:6a:44:cc-playername = player4
bb:3b:54:6a:44:cc-power = 1
bb:3b:54:6a:44:cc-syncPower = 0
bb:3b:54:6a:44:cc-syncVolume = 0
bb:3b:54:6a:44:cc-syncgroupid = 72812330
bc:2a:ae:6b:ab:ce-playername = player3
bc:2a:ae:6b:ab:ce-power = 1
bc:2a:ae:6b:ab:ce-syncPower = 0
bc:2a:ae:6b:ab:ce-syncVolume = 0
bc:2a:ae:6b:ab:ce-syncgroupid = 72812330
db:3a:52:e6:70:6b-playername = player1
db:3a:52:e6:70:6b-power = 1
db:3a:52:e6:70:6b-syncPower = 0
db:3a:52:e6:70:6b-syncVolume = 0
db:3a:52:e6:70:6b-syncgroupid = 675042355
mDNSname = SlimServer
username =
[vmuser@slimserver1 ~]$

```

(b) Sync Groups Can Overlap

51. Dr. Almeroth takes the position that even if sync groups were zone scenes, Squeezebox also did not disclose overlapping zone scenes (sync groups). Almeroth Rebuttal Report ¶¶ 971-974. However, as I explained in my previous reports, and as I showed in my testing, a computer could be set up with multiple (e.g., 2) instances of slimservers, such that a Squeezebox player could be part of one sync group (on one slimserver) and at the same time be part of another sync group (on another slimserver). Dr. Almeroth rejects the use of two different servers, but does not point to any specific requirement in the claims that restricts the claims to cover only a single server. In any case, Dr. Almeroth's distinction between a single server running on the same hardware and two servers running on the same hardware is ephemeral as a single server can accomplish the same task. And it is similarly irrelevant whether "grfd" messages would be received from one or two SlimServer instances. Additionally, as I explained in my previous reports, the Squeezebox system, alone or in combination with secondary references such as Sonos Forums would have rendered obvious the use of overlapping groups.

Contains Highly Confidential AEO and Source Code Materials

52. Dr. Almeroth further claims that a sync group “only existed temporarily during the limited time that the group was activated for playback, and as soon as a user wanted to use a Squeezebox player in an existing group for individual playback or wanted to create a new group that included one or more of the Squeezebox players in the existing group, the existing group would need to be destroyed by removing the one or more Squeezebox players that the user wanted to use for individual playback or wanted to include in a new ‘sync group.’” Almeroth Rebuttal Rep. ¶ 936. However, as I explained in my previous reports, it is possible for the network device (slimserver1, slimserver2) to send an indication to a Squeezebox or SoftSqueeze (e.g., player1) that it has been added to a synchronization group including a Squeezebox or SoftSqueeze that is in at least one other group (e.g., player1 + player2). In this way, both groups (player1 + player2 and player1 + player3) are configured to play back music synchronously when “invoked.” Dr. Almeroth states that I “fail[] likewise to explain the significance or relevance of this “later version of the ‘serv’ message” to his opinion that a Squeezebox player could be a member of two different “sync groups” that are both in existence at the same time.” Almeroth Rebuttal Rep. ¶ 974. In focusing on the “later version,” Dr. Almeroth misses the point I made in my earlier reports - the prior art SlimServer product was designed to allow users to switch servers. The serv message, even in its earlier version, is evidence that Squeezebox implemented the feature of allowing users to switch a Squeezebox player from a local server (SlimServer) to a different server (the SqueezeNetwork). Switching from the SlimServer to the SqueezeNetwork allowed users to continue playback even after their computer (running the SlimServer) was turned off. Squeezebox advertised the ability to do this to its users, and it was therefore not an unknown or rare feature; it was an advertised and core feature. *See e.g.*, <https://silentpcpreview.com/squeezebox-3-digital-music-box/>. And Squeezebox users did set up multiple servers, contrary to Dr. Almeroth’s speculation. *See e.g.*

Contains Highly Confidential AEO and Source Code Materials

https://www.enjoythemusic.com/magazine/equipment/1205/slimdevices_squeezebox.htm (“Just in case you were wondering, you can attach more than one Slimserver to your network. . . . Very Cool.”). Squeezebox’s advertising, and users’ testing of two-server set-ups, which they considered “Very Cool,” also indicates that the two-server test I did is not artificial or unrealistic as Dr. Almeroth contends, but rather is a usable and appreciated function that existed in the product at the time.

(c) Sync Groups are “configured for synchronous playback”

53. Dr. Almeroth acknowledges that a sync group creation in the Squeezebox system would “cause the SlimServer software to (i) store information about the newly-created “sync group” in a file on the computer running the SlimServer software and (ii) configure itself to control the audio buffer and playback on the Squeezebox players in the “sync group.” Almeroth Rebuttal ¶ 934. Dr. Almeroth appears to rely on this to argue that “a ‘sync group’ of Squeezebox players was not a pre-saved group of ‘zone players’ that are ‘to be configured for synchronous playback of media’ when the pre-saved group is ‘invoked’ for the additional reason that the invocation of a ‘sync group’”. Almeroth Rebuttal Rep. ¶ 939. But Dr. Almeroth offers no basis for why it is somehow insufficient for the SlimServer software (i) to store the information about a newly created sync group, and (ii) to be aware of the group and its members. For a player to be “configured for synchronous playback” does not require a local “change to the configuration” of the player itself, as Dr. Almeroth contends, nor an “awareness” by the speaker that it has been added to the group. Instead, in my opinion, as long as the players are configured for synchronous playback, the claim element is satisfied.

54. There is also no requirement in the claim that the information about the newly created sync group be stored at the speaker. Moreover, I understand that dependent claims 3 and 4 of the ’966 patent further recite “causing storage of the first zone scene at a location other than

Contains Highly Confidential AEO and Source Code Materials

the computing device,” and I understand that because dependent claims must narrow the scope of independent claims, independent claim 1 is not limited to storage of the first zone scene at the computing device.

55. Dr. Almeroth appears to generally take issue with powering off and/or powering on of speakers to show that sync groups behaved as the claimed zone scenes. *See* Almeroth Rebuttal Rep. ¶¶ 953-959. But Dr. Almeroth appears to ignore that when a player is part of a sync group and powered on it is actively participating in the group, as evidenced by the master/slave structure, but when a player is powered off only the master/slave active settings are changed while the persistent settings are not. In other words, the Squeezebox/SlimServer system can separate sync group creation from sync group invocation. *See e.g.*, Schonfeld Op. Report ¶¶ 768-770.

56. Dr. Almeroth states “there appears to be no real dispute that as long as the members of a ‘sync group’ were powered up, it was only possible to control and use those members as part of the group, and none of the members could be used for individual playback.” Almeroth Rebuttal Rep. ¶ 965. This is incorrect. As I described in my opening report, it was possible to control and use a player (e.g. Player 1) even after Player 1 was part of a sync group with Player 3. *See* Schonfeld Op. Report ¶ 518 (“After Step 1, in which I synchronized Player 1 and Player 3, i.e., created a group with Player1 and Player 3, I next chose to have Player1 play a new song “Jennie” on its own (Player3 still being off). Throughout this process, the server (slimserver2)’s preferences file indicated Player1 was in a sync group with Player3, (with group ID 980703837). In other words, Player1 was still configured to play in standalone mode, even after it has joined the group previously setup in Step 1.”).

(d) Squeezebox Discloses Standalone Mode

57. With respect to a Squeezebox player’s ability to play back audio individually, Dr. Almeroth misinterprets one of my statements (“Slim Server also allows a Squeezebox to play

Contains Highly Confidential AEO and Source Code Materials

media without being in a synchronization group, which corresponds to the claimed standalone mode”) to support his argument “that a ‘sync group’ is unable to exist in an inactive state and is one of the reasons that a ‘sync group’ fails to amount to a ‘zone scene.’” Almeroth Rebuttal ¶ 951. I do not agree with Dr. Almeroth’s characterization of my opinions. Rather, my Opening Report clearly explained that while a Squeezebox was part of a saved synchronization group, the Squeezebox could still be used to play media on individual players, as required by claim 1 of the ’966 patent.

(e) Element 1.10 of the ’966 Patent (selected for invocation)

58. The requirement for the claimed “first zone player” to “receiv[e] a third request to invoke the first zone scene,” is met by Squeezebox. Dr. Almeroth reiterates his arguments that this limitation is not met because in his view a sync group is not a “zone scene.” Almeroth Rebuttal Rep. at 1044-1047. Dr. Almeroth also argues my theories are faulty because they are “based on hypothetical scenario in which two independent SlimServer instances would be used to create two ‘different sync groups.’” Almeroth Rebuttal Rep. ¶ 1062. For the reasons above, and as explained in my previous reports, I disagree. I am also not aware of any legal requirement to show that a POSITA implemented any specific combinations to show obviousness. Dr. Almeroth also addresses my “two different theories.” Almeroth Rebuttal Rep. ¶ 1052. With respect to my “first theory,” Dr. Almeroth appears to try to construe the meaning of “invoke” “in the context of the claim language and specification of the ’966 Patent,” and to distinguish between creation, invocation, and playback. *Id.* ¶ 1056. Specifically, Dr. Almeroth appears to argue that invocation is “activat[ion] for synchronous playback, which is distinct from the act of initiating playback” although “it is possible that playback could be automatically initiated as a result of” invocation. *Id.* Dr. Almeroth’s construction of this term is confusing and seemingly internally inconsistent, but regardless, Dr. Almeroth provides no basis in the claims, specification, or otherwise as to why

Contains Highly Confidential AEO and Source Code Materials

a POSITA would construe “invoke” in such a way, contrary to the plain and ordinary meaning of the term. With respect to my “second theory,” Dr. Almeroth states that “the user action of ‘turning on’ a powered-off Squeezebox player in Dr. Schonfeld’s hypothetical ‘sync group’ does not amount to a ‘request to invoke’ the ‘sync group.’” Almeroth Rebuttal Rep. ¶ 1059. But Dr. Almeroth’s only basis for this appears to be that the sync group “would be automatically invoked at the time of its creation,” which is an argument that I have already addressed above. *Id.*

2. Element 1.11 of the ’966 Patent (configured to coordinate)

59. Dr. Almeroth appears to argue that Squeezebox does not meet this limitation because the Squeezebox players would have “never ‘coordinate[d] through master and slave communication to output music in synchrony.’” *See, e.g.,* Almeroth ¶ 1079. Accordingly, Dr. Almeroth appears to take the position that “coordinat[ing]” requires direct communication between players. But nothing in the claim requires direct communication between zone players, and Dr. Almeroth’s reading of “directly communicating” instead of “coordinating” is wholly unsupported. There is no indication that a POSITA would have understood coordinating this narrowly. And the plain meaning of “coordinate” does not require “direct communication” as Dr. Almeroth contends. To the contrary, a campaign coordinator would not be expected to be in direct communication with every individual involved in the campaign. Nor would an organization “coordinating” a disaster relief campaign necessarily be in direct communication with everyone participating in the relief efforts. Under Dr. Almeroth’s construction of “coordinate,” an airline passenger buying a ticket for a specific flight would need to contact each and every other potential passenger in order to coordinate flying from point A to point B. I am not contending that any of these analogies perfectly capture the operation of the Squeezebox or claimed system; however, they are illustrative of flaws in Dr. Almeroth’s theories. Dr. Almeroth also appears to draw a distinction between the computer installed with the SlimServer software and the “master device” (the control device). *See e.g.*

Contains Highly Confidential AEO and Source Code Materials

Almeroth ¶ 1079, n.45 (“evidence I have reviewed establishes that it is always the computer installed with the SlimServer software – not the ‘master device’ – that sends the audio content to the ‘slave devices.’”). But Dr. Almeroth does not explain why such a distinction would support his position that Squeezebox did not disclose a player being “configured to coordinate,” as required by element 1.10.

60. Dr. Almeroth disagrees with my “suggestion that the Court made ‘statements that the ‘indication’ does not require a zone player communicating with other speakers present in the group.” Almeroth ¶ 1090, Schonfeld Op. Report ¶ 565. While I disagree with Dr. Almeroth for the reasons set forth in my Opening Report, even if the construction of “indication” did not inform the meaning of “configured to coordinate,” the plain language of “configured to coordinate” does not include any requirement for direct player-to-player coordination and Dr. Almeroth does not identify any such requirement in the claim language or intrinsic or extrinsic evidence. Dr. Almeroth has therefore applied an unduly narrow claim construction to this term.

3. Obviousness in view of general level of POSITA

61. For the same reasons I discussed above in Section IX.A with respect to the Sonos 2005 System in combination with the general level of a POSITA, I disagree with Dr. Almeroth’s opinions as to why it would not have been obvious to modify the Squeezebox system to arrive at the claimed “invention” of the ’966 patent, either based on the Squeezebox system alone, or based on the Squeezebox in view of the ordinary level of skill of a POSITA. As I explained above, and in my earlier reports, at least the Sonos Forums are evidence that a POSITA would have been motivated to modify existing systems.

4. Obviousness in view of Sonos Forums

62. For the same reasons I discussed above in Section IX.A with respect to the Sonos 2005 System in combination with Sonos Forums, I disagree with Dr. Almeroth’s opinions as to

Contains Highly Confidential AEO and Source Code Materials

why it would not have been obvious to modify the Squeezebox system to arrive at the claimed “invention” of the ‘966 patent.

C. Claims of the ‘966 Patent Are Obvious Based On Bose Lifestyle in view of General knowledge of a POSITA, the Sonos Forums, Nourse, Rajapakse or Millington.

63. Dr. Almeroth’s opinions regarding my Bose analysis are flawed and contrary to the documentation describing the Bose Lifestyle system. As I addressed with respect to the Sonos and Squeezebox systems, Dr. Almeroth asserts that the claims of the ‘885 patent are dissimilar from the claims of the ‘966 patent and that the same evidence cannot be used to invalidate the claims of both patents. I disagree for the same reasons set forth in Section VI.C, which I incorporate by reference into my opinions here.

1. Bose Lifestyle 50 System does have “Zone Players”

64. Dr. Almeroth does not credibly refute my opinion that Bose Lifestyle has “zone players.” As I opined in my Opening Report, the court in the Western District of Texas previously construed “zone player” to simply be a “playback device.” This is the construction that I applied when rendering my opinions regarding Bose. I also understand that the Court in the Northern District of California has yet to issue a formal claim construction order. My Opening Report also details why Dr. Almeroth’s proffered construction of “zone players” is incorrect. I incorporate those opinions into my analysis here.

65. Dr. Almeroth contends that the Jewel Cube, Acoustimass module, or the SA-2 or SA-3 cannot constitute a “zone player.” I disagree. The Jewel Cube, for example, is a playback device that plays audio transmitted from the Acoustimass module. Dr. Almeroth contends that the “Jewel Cube speaker is not configured to process and output audio” “and is a passive speaker that is hard-wired” thus not making it a “zone player.” Almeroth Reb. Rep. ¶ 1258. To the extent it is

Contains Highly Confidential AEO and Source Code Materials

relevant to the asserted claims, the Jewel Cube does process and output audio because it receives audio data and outputs physical audio signals.

66. Regarding Dr. Almeroth's argument about "passive" versus "active" speakers, Dr. Almeroth does not cite any evidence that the Jewel Cubes are passive, again, to the extent that this is relevant to the claims. Dr. Almeroth's reliance on the Bose documentation to show that the speakers are passive is misplaced because that documentation merely provides instructions for how to connect Jewel Cubes to the Acoustimass module. For example, Dr. Almeroth did not disassemble a Jewel Cube to show that the circuitry within that device only includes passive components, and he does not cite any other evidence for his position.

67. Dr. Almeroth's opinions regarding SA-2 and SA-3 amplifiers are equally flawed. Specifically, Dr. Almeroth contends that these amplifiers would operate like an "Acoustimass module in the sense that it would receive an audio signal over an audio cable...with no two-way digital data packet communication." Almeroth Reb. Rep. ¶ 1260. Once again, Dr. Almeroth's analysis is not tied to the relevant claim language and instead relies upon new claim constructions not ordered by the Court. The documentation that Dr. Almeroth cites (BOSE_SUB-0000001-55 at 11-12, 42; BOSE_SUB-0000361-448 at 376) does not come close to establishing Dr. Almeroth's premise, and the awareness of the system of the connected speakers indicates that Dr. Almeroth's assumption about the "one-way" communication is inaccurate.

68. Finally, Dr. Almeroth asserts that "neither a Jewel Cube Speaker, Acoustimass module, or SA-2 or SA-3 amplifier is a "zone player" as required by the Asserted Claims of the '966 patent because they did not have the capability to change their "configur[ation]" as it related to audio playback in order to transition between "standalone mode" and grouped mode." Almeroth Reb. Rep. ¶ 1261. This is pure conjecture as Dr. Almeroth does not provide a single citation for his assertion nor does he provide any analysis to substantiate his assertion. It is also contrary to

Contains Highly Confidential AEO and Source Code Materials

the evidence, as shown in my Opening Report, which detailed how these speakers can operate individually or as a group. *See* Schonfeld Opening Rpt. XI.D.

2. Bose Lifestyle 50 System does have “Zone Scenes”

69. The crux of Dr. Almeroth’s opinions regarding “zone scenes” relates to Bose’s ability to set up a “shared source” of audio that it can distribute from the centralized Multi-Room Interface to the speakers in the system. Almeroth Reb. Rep. ¶ 1269. Specifically, Dr. Almeroth proffers opinions regarding the “ROOM” and “HOUSE” buttons that are on the Personal Music Center, and contends that “when a ‘shared source group’ was activated, neither the Lifestyle players nor their connected speakers would change their configuration as it relates to audio playback.” *Id.* Dr. Almeroth then jumps to the conclusion that “there would be no coordination between the lifestyle players in a ‘shared source group’ and the Lifestyle players would not have had any awareness of whether or not they were part of a ‘shared source group.’” *Id.* I disagree. In my Opening Report I articulated several instances in which speakers in the Lifestyle system could be individually controlled even if they were part of a shared source group. Schonfeld Op. ¶ 734. Dr. Almeroth does not address these scenarios in his rebuttal report. Furthermore, as I noted with respect to the Squeezebox system, the claims do not require direct communication between the first and second zone players for those zone players to be “configured to coordinate” as claimed.

70. Next, Dr. Almeroth contends that “a temporary, ad-hoc group that was automatically activated at the time of creation and then only remained in existence during the limited time it was activated is distinctly different from a ‘zone scene,’ which requires a user-customized, pre-saved group of ‘zone players’ that is able to exist in an inactive state while remaining available for selection by a user so that it can later be invoked on demand for synchronous playback.” Almeroth Reb. Rep. ¶ 1271. But this latter part of Dr. Almeroth’s assertion is precisely what Bose allows users to do. In particular, Bose allows users to invoke the

Contains Highly Confidential AEO and Source Code Materials

ROOM command and select pre-defined groups of players, which were initially inactive, and have all the players provide synchronous playback. Indeed, similar commands can be executed on a wider scale by invoking the HOUSE button that can trigger each speaker within the system, akin to the “party mode” feature in the Sonos System.

71. Further, Dr. Almeroth asserts that a “shared source group” of speakers was not capable of having a group member that was also a member of a different “shared source group” available for selection by a user. Almeroth Reb. Rep. ¶ 1275. I disagree with this statement. For example, in my Opening Report I explained how the Bose documentation articulates how users can implement more than one shared source for invoking playback on the Zone Players. Dr. Almeroth fails to address this in his report.

3. Obviousness In View Of Knowledge Of POSITA

72. I disagree with Dr. Almeroth’s opinion that “even if the Bose Lifestyle 50 System were to be modified in the various ways proposed by Dr. Schonfeld, such a hypothetical system still would not achieve either the specific player-side ‘zone scenes’ functionality.” Almeroth Rebuttal Rpt. ¶ 1441. Dr. Almeroth’s opinion contains no analysis and only provides boilerplate language that the alleged functionality is not present in Bose or that a POSITA would not be motivated to modify Bose accordingly.

73. Regardless, Dr. Almeroth contends that my suggestion in paragraph 908 of my Opening Report regarding adding overlapping groups is misplaced. Specifically, Dr. Almeroth relies on the fact that Bose’s marketing materials touted the ability of the Bose system to allow users to play back media throughout their household during the 2005-2006 timeframe. Dr. Almeroth then leaps to the conclusion that because of this a POSITA would not have been motivated to modify Bose Lifestyle 50 System in any way. Almeroth Rebuttal Rpt. ¶ 1445. Again, Dr. Almeroth provides no support for his conclusory statements. I disagree with Dr. Almeroth’s

Contains Highly Confidential AEO and Source Code Materials

opinion, and in my Opening Report, I explained that the various components were all designed and manufactured by Bose, who had the know-how and ability to easily combine the elements to meet consumer demand.

D. Claims of the '966 Patent Are Obvious Based on Obviousness Type Double Patenting Over The '645 patent.

74. Dr. Almeroth's primary rebuttal to the obviousness of the '966 patent claims over Sonos's '645 patent is that the '645 patent does not disclose the claimed "zone scenes." Dr. Almeroth provides his usual highly detailed claim construction for "zone scenes" and determines that this is distinct from "ad hoc" grouping, which he claims is what the '645 patent is directed to.

Again, a "zone scene" requires a user-customized, pre-saved group of "zone players" that is able to exist in an inactive state while remaining available for selection by a user so that it can later be invoked on demand for synchronous playback. In contrast, an ad-hoc "zone group" is automatically invoked at the time of creation and then only remains in existence for the temporary period of time during which it is activated, and once deactivated, the "zone group" would cease to exist. Because claim 1 of Sonos's '645 patent are directed to the Sonos ad-hoc "zone group" functionality that was utilized by Sonos's 2005 system, claim 1 of Sonos's '645 patent fails to disclose or render obvious the "zone scene" technology of the Asserted Claims of the '966 Patent for the same reasons that Sonos's 2005 system fails to disclose or render obvious the "zone scene" technology of the Asserted Claims of the '966 Patent. Almeroth Reb. Rep. ¶ 1567.

75. Dr. Almeroth argues that the claimed "zone group" in the '645 patent must be "automatically invoked at the time of creation."

Moreover, as described in claim 1 of Sonos's '645 patent, the "zone group" is automatically invoked at the time of creation when the user "identif[ies]" and "select[s]" the "zones" to be included in the "zone group" and the "multimedia controller" transmits a "modified zone group configuration" to a "zone player of the zone group," which "causes the zone player of the zone group to configure the zones in the zone group to synchronize playback of the first multimedia content currently being played by the first zone." Almeroth Reb. Rep. ¶ 1571.

76. These statements contradict Dr. Almeroth's opinions on non-infringing alternative

1. And claim 1 of the '645 patent does not include any restriction that the zone groups be

Contains Highly Confidential AEO and Source Code Materials

“automatically invoked” as Dr. Almeroth opines. In fact, the specification of the ’645 patent discloses embodiments where no such “automatic invocation” is required, and as I discuss below, Dr. Almeroth has not shown any reason that the claims should not be read to cover those embodiments or any reason that the patentee had disclaimed those disclosed embodiments.

77. Dr. Almeroth argues that a continuation-in-part in the chain of priority for the ’645 patent shows that the invalidating disclosures were not added until February 21, 2008. *E.g.*, Almeroth Reb. Rep. ¶¶ 1563-64. This argument does not affect my opinions because the relevant disclosures for “zone scenes” existed both prior to this continuation-in-part application and afterwards. Below, I use Dr. Almeroth’s exhibit 4, which shows a redline comparison of the pre-CIP specification with the post-CIP specification. *Id.* ¶ 1563 (“To help illustrate the portions of the ’645 specification that were added to the disclosure as part of the continuation-in-part application filed on February 21, 2008, I have attached as Exhibit 4 a redline comparison of the specification of Sonos’s ’645 patent and the specification of Sonos’s ’014 patent (which contains the disclosure as it existed prior to the continuation-in-part application filed on February 21, 2008).”). As shown below, the most relevant disclosures appeared both before the February 21, 2008 CIP and afterwards.

78. For example, contrary to Dr. Almeroth’s opinions that the specification only discloses “ad hoc” zone groups and not the claimed “zone scenes,” the original specification (highlighted in yellow below) disclosed that “any zone players that have been used in a group may or may not be used in another group,” and it provided an example of zone players existing in multiple of the claimed “zone groups.” Because a speaker (zone player) obviously cannot be active in two different zone groups at once, it is clear that these zone groups meet Dr. Almeroth’s construction of the term “zone scene.” The zone groups are user customizable (as shown in the example below), saved, and may be inactive while awaiting “invocation” by a user.

Contains Highly Confidential AEO and Source Code Materials

~~After the user confirms the selection, the newly formed zone group configuration is updated and the audio source can be played synchronously for all of the zone players in the newly formed zone group as shown in FIG. 3A. The first “Zone menu” 312 is displayed again with the newly formed zone group 314 as one of the choices along with other available zone players. Depending on implementation, any zone players that have been used in a group may or may not be used in another group. As shown in FIG. 3A, the zone players 2 and 4 are in a zone group started by the zone player 2, the zone player 4 (even the zone player 2) can be in another zone group, for example, while a player in a living room is grouped with a player in a dining room, the same player in the living room can be grouped with a player in a family room.~~

Almeroth Reb. Rep. Ex. 4 at 14.

79. There is no dispute that the specification post-CIP also discloses zone scenes, and therefore the substance of this disclosure was maintained into the finalized patent written disclosure and adequately describes the claimed embodiments, which invalidate the asserted claims of the '966 patent as I opined.

80. Similarly, the patent specification shows that the claimed “zone groups” are *saved*, and in fact “one or more saved zone configuration files” may be “retrieved for modification at any time.” Accordingly, Dr. Almeroth’s stated requirement that “zone scenes” be predefined, user configurable, and available to be invoked/retrieved while in an inactive state is also disclosed in the '645 patent and claimed through “zone groups.” *See* Almeroth Reb. Rep. ¶ 1567 (“Again, a ‘zone scene’ requires a user-customized, pre-saved group of ‘zone players’ that is able to exist in an inactive state while remaining available for selection by a user so that it can later be invoked on demand for synchronous playback.”).

According to one embodiment of the present invention, ~~the memory_206_ is used to save one or more saved zone configuration files that may be retrieved for modification at any time.~~ Typically, a saved zone group configuration file is transmitted to a controller (e.g., the controlling device_140_ or_142_ of_ FIG. 1, a computer, a portable device, or a TV) when a user operates the controlling device. The zone group configuration provides an interactive user interface so that various manipulations or control of the zone players may be performed.

Almeroth Reb. Rep. Ex. 4 at 8.

Contains Highly Confidential AEO and Source Code Materials

81. In paragraph 1594 of his rebuttal report, Dr. Almeroth opines “that ad-hoc ‘zone group’ functionality was being praised throughout the industry” and therefore it would not have been obvious to modify claim 1 of the ’645 patent in the ways I suggested in my Opening Report. But Dr. Almeroth’s opinions are internally inconsistent because he opines at the same time that the “ad hoc” grouping allegedly in Google’s design-around, which has speakers joining groups immediately begin acting a member of that group, would be commercially unacceptable. This is inconsistent with his position here that his alleged “ad hoc” grouping was “pure heaven,” “the Lexus of the category,” etc. *See* Almeroth Reb. Rep. ¶ 1594.

X. NON-INFRINGEMENT ALTERNATIVES

82. I fully incorporate herein by reference my discussion of the non-infringing alternatives disclosed in my Opening Report and in my Rebuttal Report.

A. Non-Infringing Alternative – No Standalone Mode

1. No Infringement

83. Dr. Almeroth opines that the “no standalone mode” alternative does not operate as I have described.

I have now had an opportunity to observe testing of Accused Google Players with firmware version 1.56.324896. Based on this testing, it does not appear to me that Accused Google Players with this software update installed operate in accordance with Dr. Schonfeld’s description of NIA 1 in his opening report or Google’s description of NIA 1 in its supplemental response to Sonos’s interrogatory no. 18.

Almeroth Rebuttal Rep. ¶ 1643.

84. In particular, he opines that he “did not observe any Accused Google Player beginning to engage in active playback of media, or even continuing to actively playback media, after creation of a new speaker group including that Accused Google Player” and that he “did not observe any change to the playback state of an Accused Google Player that is not actively playing back media once that Accused Google Player was added to a new speaker group.”

Contains Highly Confidential AEO and Source Code Materials

I, Dan Schonfeld, declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

A handwritten signature in black ink that reads "Dan Schonfeld". The signature is written in a cursive style, with the first name "Dan" and the last name "Schonfeld" clearly legible. The signature ends with a large, circular flourish.

DATED: January 23, 2023

Dan Schonfeld, Ph.D